GENBAND™

DRIVING THE **NETWORK EVOLUTION**

G6

The G6® Universal Gateway is a carrier class, multipurpose gateway that simultaneously supports multiple VoIP service architectures. Purpose-built for highly reliable VoIP, the G6 uses the latest generation of advanced, all-in-one DSPs and platform architecture for high qua lity VoIP and fax/modem handling. A NEBS Level 3 certified platform, the G6 is fully redundant, produced in a TL9000 quality system and deployable in ILEC, PTT, RLEC, CLEC, and MSO networks. The G6 is scaled for small to mid-sized gateway applications, supporting 240 to 16,128 ports (DS0s) in a single chassis.

The G6 provides connectivity at the border between the IP and TDM/circuit-switched networks. Highly versatile, the G6 advances VoIP in service provider networks and supports multiple solutions including:

- Voice over FTTx: The G6 interworks V5.2, GR-303, and TR-08 with IP protocols including MGCP and H.248, allowing local exchange circuit switches to provide voice services in GPON, IP DSLAM, and other IP-based access networks; E1/T1/PRI over FTTx is also supported via PseudoWire Emulation over IP

- C.O. Modernization: With its Packet Line Gateway feature, the G6 allows NGN softswitches, SIP application servers, and IMS cores to control customer lines on access platforms like Digital Loop Carriers (DLCs), Access Nodes (ANs) and proprietary local exchange line frames and remotes

- Cable VoIP: The G6 is a PacketCable qualified media gateway providing a full range of cable trunking, access, and commercial services

- PBX Trunking: Working with GENBAND's S-Series security platforms, the G6 provides SIP to PRI and SIP to CAS trunking at the service provider border

- IP Trunking: The G6 enables scalable voice trunking between legacy TDM/PSTN and IP networks via MGCP, H.248, and SIP call control where a smaller form factor is required

- Network Survivability: With its Emergency Stand Alone feature, the G6 provides call control if softswitch or IMS core connections are disrupted to TDM or IP endpoints

INTEROPERABILITY

The G6 is compatible with IMS, TISPAN NGN, MSF, and PacketCable networks, and interoperable with the world's leading softswitches, SIP application servers, GENBAND border gateways, IP and TDM access equipment, and CPE.

MANAGEMENT

The GenView EMS is a robust GUI-based element manager for the G6, providing complete FCAPS support, and the G6 also has a fully-featured Command Line Manager (CLI).

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PSTN CONNECTIVITY

- Simultaneous Calls: 240 to 16,128 non-blocked
- Interconnection Modes: IMT, MF, CAS, PRI, V5.x, GR-303, TR-08, PWE3, R2*
- V5.2/GR-303/TR-08 Interface Groups: 50
- PSTN Interfaces: E1, T1, STS-1/chDS3
- Echo Cancellation: G.165, G.168, 0-128ms
- CODEC Support: G.711 PCM, G.726 ADPCM, G.729, Mu/A-law
- Silence Suppression
- Idle Channel Suppression
- Transparent Fax/Modem Detection, Upspeed, and Codec Negotiation, T.38 support

ETHERNET/IP CONNECTIVITY

- IP Interfaces: Single and Dual-Port Gigabit Ethernet
- GbE redundancy to ensure stateful switchover from facilities failures on VoIP and PWE flows
- VoIP Signaling: H.248, MGCP (rfc3435), TGCP, SIP (rfc2543), NCS, SIGTRAN
- PseudoWire Emulation: SAToP, CESoPSN
- CableLabs PacketCable qualified
- IP QoS: Priority Queuing, ToS, DiffServ
- 802.1q (VLANs) with 802.1q prioritization

MANAGEMENT

- GenView EMS, SNMP, CLI, TL-1, Telnet, XML

EMERGENCY STAND ALONE (ESA)

- ESA for MGCP/H.248 VoIP endpoints
- ESA for legacy DLCs, ANs, line frames, Broadband Loop Carriers
- ESA supports up to 10,000 subscribers

CLOCK SPECIFICATIONS

- Sources: Dual BITS inputs, Dual Compositie Clock inputs, PSTN E1/T1 Interfaces, Internal Stratum 3 clocking (with holdover)

REDUNDANCY AND AVAILABILITY

- 99.999% Availability per Telcordia
- System Control: 1+1
- GbE/IP: 1+1, LACP
- TDM: 1:N
- Power: 1+1
- Management Interface/Facility: 1+1
- System Clock: Primary, Secondary, Tertiary
- Fan Subsystem: N+1
- Hot-swappable Components
- Non-Service Affecting (Hitless) Upgrades
- Emergency Stand Alone (ESA)

CHASSIS, POWER, AND OPERATING SPECS

- 19" or 23" rack mount, front or mid-mount, 450 and 500 MM ETSI
- 22.75"/577.85 mm H (13 RU) x 11.02/280 mm D
- Chassis per 7' Rack: 3
- Active cooling with replaceable filter
- Power: Dual A&B rails, -40V to -60V DC, 9.0A max,; ultra-low power at 425W loaded
- Temperature: Operating: +5C to 40C; Short-Term Operating: -5C to 50C; Storage: -40C to 70C; Humidity: 5% to 90% non-condensing

REGULATORY COMPLIANCE

- Safety: UL 60950-1 (USA), CSA C22.2 No. 950 (Canada), IEC 60950-1 (Europe), EN 60 825 (Europe), ACA TS001 (Aus), AS/NZS 3260 (NZ)
- Electromagnetic Compliance (Emissions): FCC Class A (USA), ICES-003 Class A (Canada) EN 55 022 Class B (Europe), VCCI Class B (Japan) AS/NZS 3548 Class B (New Zealand)
- NEBS Level 3 Certified per Telcordia SR-3580: Telcordia GR-63-CORE, Telcordia GR-1089-CORE
- Certification of Terminal Equipment: FCC Part 68 (US), CS-03 (Canada

FEATURES

- Access gateway feature connecting Class 5 / Local Exchanges to GPON, IP DSLAM and other FTTx access networks
- Packet Line Gateway connecting NGN /IMS call control to legacy access (DLC, AN, DCO, EWSD)
- PSTN trunking for NGN softswitches, IMS cores, and SIP application servers via MGCP, SIP, H.248, TGCP
- Emergency Stand Alone for packet and TDM endpoints
- NEBS Level 3 and ETSI compliant